Journal of the Society of Arts.

FRIDAY, JUNE 29, 1866.

Announcements by the Council.

INSTITUTIONS.

The following Institution has been received into Union since the last announcement:—

Burnley, Church of England Literary Institution.

Proceedings of the Society.

ANNUAL GENERAL MEETING.

The Annual General Meeting, for receiving the Report from the Council, and the Treasurers' Statement of Receipts, Payments, and Expenditure during the past year, and also for the Election of Officers, was held, in accordance with the Bye-laws, on Wednesday, the 27th inst., at 4 p.m. WILLIAM HAWES, Esq., Chairman of the Council, presided.

The Secretary having read the notice convening the Meeting, the minutes of the last Annual General Meeting, and of the subsequent Special General Meeting, were read and signed.

The Chairman then nominated Mr. Botley and Mr. Purling as scrutineers, and declared the ballot open.

The Secretary then read the

ANNUAL REPORT OF THE COUNCIL.

The Council have now the pleasure of meeting the members at the close of the one hundred and twelfth Session, and of laying before them, in compliance with the Bye-Laws, a report of the transactions of the past year, a duty which they perform with all the more satisfaction, as they feel that they may with reason congratulate the members on the increased influence and prosperity of the Society.

MEDALS AND PRIZES.

The subject of the prize placed at the disposal of the Council by Sir Walter Trevelyan, and offered for the preservation of meat in a raw state, naturally engaged attention at a time when the prevalence of the cattle plague and the high price of meat, gave rise to serious apprehensions in the public mind as to the supply of food for the people. Several claimants have brought their plans before the Council for effecting the objects sought, but no process has yet been sufficiently matured to justify the Council in awarding the prize, though the progress made in the experiments warrants the expectation that at no distant period the object may be attained.

The enormous tracts of peat in the United Kingdom, and especially in Ireland, have long attracted the attention of thoughtful men, in the hope that something might be done to render useful that which, up to the present time, has remained nearly valueless to the community. Many have been the endeavours to convert into an available and effective fuel at a reasonable cost that important product, which, containing as it does all the chemical elements suitable for combustion, has hitherto baffled the efforts of our inventors. One of the Council, Mr. Bailey Denton, liberally placed at their disposal a sum of £50, as a prize for the production of useful fuel from peat; to this sum the Council added the Society's Gold Medal, the conditions of the offer being, that the fuel "shall be equal in quality to good household coal for ordinary purposes, and capable of being sold in the market commercially at less cost than such coal; the attainment of this object to be demonstrated practically and on a commercial scale." No process has yet been submitted to the Council for which they could feel justified in awarding the prize, but from communications that have been made to them, it appears that some progress at least has been made towards the desired end.

The promoters of the great International Horticultural Exhibition and Botanical Congress, recently held with so much success, applied to the Society early in the present Session to aid the undertaking, and it was found that the Council could best do so, and at the same time promote the legitimate objects of the Society, by offering prizes for implements connected with the advancement of Horticulture, and they therefore decided upon offering the sum of £50 as prizes for objects of this nature. A detailed account of these prizes was published in the *Journal*, p. 86. Some of them, it is understood, have been awarded, but the report of the Judges has not yet been received.

In the last list of premiums issued by the Society, a prize was offered "for the introduction into commercial use, at a moderate price, of the essential oils of Australia." This prize has been claimed by Mr. J. Bosisto, for the importation of the essential oil of the Eucalyptus, which, it appears, he has made an article of regular commerce, and the Committee to whom the Council referred the consideration of the claim having unanimously recommended them to award to him the Society's medal, this award has accordingly been made.

For the papers read during the Session silver medals have been awarded by the Council as follows:—To Mr. J. C. Morton, for his paper "On London Milk;" to Mr. Thomas Gray, for his paper "On Modern Legislation in regard to the Construction and Equipment

of Steam Ships;" to Dr. J. L. W. Thudichum, for his paper "On the Diseases of Meat as affecting the Health of the People;" and to the Hon. Charles Gavan Duffy, for his paper "On some Popular Errors concerning Australia."

Whilst on the subject of prizes, the Council have pleasure in recording that Mr. Alfred Davis, a member of the Society, has placed in their hands the sum of 20 guineas to be awarded as a prize for any subject for which they may deem it desirable to offer it. What that subject shall be, it will be the duty of the succeeding Council to determine.

The success of the North London Industrial Exhibition placed at the disposal of the committee of that undertaking a net surplus of £150, and this sum the committee requested the Council of the Society to take charge of and invest, as Trustees, the interest therefrom to be applied as a prize, to be called the North London Exhibition Prize, and to be awarded annually by the Council for the best specimen of skilled workmanship that may be exhibited for competition at the Society's house; but in the event of a Museum being instituted in the north of London, the principal is to be paid over to the trustees of that museum, for the purpose of purchasing objects to be placed therein. The Council have accepted this trust, and the money has been invested in the name of the Society in the purchase of £167 7s. 3d. consols. The attention of workmen and others has been called to this prize in the Art Workmanship Programme, put forth by the Society for the current year. The members have been already made aware of the results of the art workmanship competition for the present year, the details having appeared in the *Journal*, p. 154. The Council feel much indebted to Messrs. Richard Redgrave, R.A., M. Digby Wyatt, and Alfred Morrison, for their valuable services, as judges of the works sent in by the competitors, and it will be a source of gratification to the members to know that many of the best productions have been purchased by the Department of Science and Art, for the South Kensington Museum.

Before renewing the competition for another year, the Council thought it right to confer with the workmen themselves on the subject, so as to ascertain whether any alterations in the conditions and terms of offer were desirable, with the view of rendering the competition more attractive to the class whom it was desired to benefit. At one of the evening meetings the workmen were therefore invited to attend, and a report from the secretary having been read, showing what had been done and the results of the three competitions already held, a discussion was taken. It did not appear that any material alteration in the terms and conditions already settled was needed, but, in order to meet the views entertained by some of the workmen, who thought that their efforts should not be entirely confined to the working from prescribed models or examples, it was determined to introduce a clause, following the offer of prizes in the various departments of art workmanship executed after prescribed designs, to the effect that any producer will be at liberty to exhibit, either in his own name or in the name of his workman, any work or works as specimens of good workmanship in the various classes, provided that the work or works be accompanied with a statement of the name or names of the artizans who have executed their respective portions; and, if the works be sufficiently meritorious to deserve them, extra prizes will be given to the artizans who have merited them. Another clause was added, to the effect that artizans may, if they think fit, exhibit works executed by them after their own designs in any of the classes, and such works may or may not contain the whole or a portion of the prescribed designs, but must be of a similar style and character, and extra prizes, when deserved, will be awarded. The Council have added, as a further inducement for competitors to come forward, that after the articles have been exhibited in the Society's rooms and at the South Kensington Museum, a selection of the best works will be made, and sent to the Paris Exhibition of 1867.

The Albert Gold Medal, for distinguished merit in promoting Arts, Manufactures or Commerce, has this year, with the cordial approval of His Royal Highness the President, been awarded by the Council to Professor Faraday, whose "discoveries in Electricity, Magnetism, and Chemistry, in their application to the industries of the world have so largely promoted Arts, Manufactures, and Commerce." The Council feel that to attempt to enumerate all which that distinguished philosopher has done, would involve the writing a history of physical science, and its bearing on the material progress of mankind during the last forty years. The name of Faraday carries with it such a world-wide reputation as to need no detailed statement of his discoveries and researches to recommend this award to the sympathy of the members. Indeed, it may be truly said, that while the Society thus confers an additional distinction on that singularly high-minded and unselfish man, whose merit all scientific bodies, both at home and abroad, have for many years past vied with each other in recognizing, it does itself honour by thus associating itself with so eminent a name. The health of Professor Faraday not admitting of his attendance at a general meeting of the members of the Society, Mr. Hawes, Chairman

of the Council, accompanied by Sir Thomas Phillips, one of the Vice-Presidents, and the Secretary, waited upon the Professor, by his request, at his residence, on Saturday, the 16th inst., and presented him with the medal, on receipt of which he expressed much gratification.

CANTOR LECTURES.

Three courses of these lectures have been delivered during the Session. The first was by Mr. G. W. Hastings, LL.D., "On the Effects of the Discovery of the Precious Metals," "On Copyright," and "On Limited Liability." The second course was by Mr. Fleeming Jenkin, F.R.S., "On Submarine Telegraphy;" and the third by Dr. F. Crace Calvert, F.R.S., "On the Synthesis and Production of Organic Substances by Artificial Means, and the Applications which some of them receive in Manufactures."

These lectures continue to be well attended, proving that the Council did not over estimate the interest which the treatment of subjects of so much importance by men, all eminent in their respective branches of knowledge, would be likely to excite amongst the members. Abstracts of the first two courses have already appeared in the *Journal*, and a full report of Dr. Crace Calvert's lectures will, as on former occasions, be published during the vacation. Two of the gentlemen who appeared before the Society during the past Session were already well-known to the members, and the valuable character of their lectures was acknowledged. The third, Mr. Fleeming Jenkin, gave a most interesting course upon a subject which, notwithstanding its important bearing on commerce and the affairs of every-day life, is comparatively little known. The lecturer's able and clear treatment of his subject, and the manner in which he succeeded in gaining the attention of his audience to questions, many of them of a very abstruse and difficult character, will be remembered by all who were present at that course.

DWELLINGS OF THE LABOURING CLASSES.

The Committee, which made its report last year, was re-appointed at the commencement of the Session, with the view of endeavouring to get the recommendations embodied in that report carried out, so far as might be found practicable. One of those recommendations was, that, with the view of extending an accurate knowledge of the powers contained in the Acts providing for the removal of nuisances, the Council should prepare and publish a concise analysis of the existing laws, calling the attention of the educated classes to this important subject, and pointing out how, merely by a little exertion on their part, they may confer most important benefits upon a large mass of working people, and upon the country generally. Accordingly, the Committee induced Mr. Martin Ware, barrister-at-law, to undertake the preparation of such a work, and Messrs. Bell and Daldy, the Society's publishers, took the risk of publication. The book was brought out by them in a cheap form, at the price to the public of sixpence, the Society having a certain number of copies free of charge for distribution amongst such persons as might be likely to take an interest in the subject and promote the objects in view.

The Council also brought under the consideration of Her Majesty's Government another recommendation of this committee, namely, the importance of the Government Loan Commissioners being empowered to advance money at a low rate of interest for the building of dwellings for the labouring classes, under suitable guarantees and with due regard to sanitary arrangements, and they have much pleasure in informing the members of the Society that this year the Government have passed a bill through Parliament giving such powers.

In connection with this subject, the Council have to add that, at the request of Mr. James Hole, of Leeds, they have permitted a work prepared by that gentleman, on the Dwellings of the Labouring Classes, to be published under their sanction. They had much pleasure in acceding to Mr. Hole's request, as that gentleman has had considerable practical experience in all matters connected with the working classes and their dwellings for many years; and, some fourteen years ago, gained the Society's prize of £50 for his valuable essay on Mechanics' Institutions. The Council have also been engaged, in conjunction with the Association for the Promotion of Social Science, in other measures for the improvement of the dwellings of the working classes; and a joint committee of the two Societies has prepared a Bill for granting powers to certain bodies, under certain conditions, to purchase compulsorily property which, either by neglect of the owner or by the uses to which it is applied, has become unhealthy or a nuisance to the neighbourhood, and to erect thereon dwellings of an improved character suitable for the working classes. The Bill, however, owing to the condition of public business in the House of Commons not affording much chance of its being passed this Session, has not yet been brought before the Legislature. The Draft Bill will be found printed at p. 443 of the *Journal* for the present year.

MUSICAL EDUCATION.

The evidence taken before the Committee on this subject has been closed. It has been published from time to time in the *Journal*, and has been found to excite much interest, both amongst the members and the public generally. The Committee have made their first report,

but in order to give it practical effect, much careful deliberation will be necessary. Since the appointment of the Committee, the Royal Academy of Music has received notice to quit the premises near Hanover-square, which it has occupied ever since its foundation, and it is now leaving them. If the Royal Academy is to be the centre of the musical education of the United Kingdom, the possession of suitable premises is a necessity, and some long time must elapse before they can be built, even after the necessary funds are procured. The Council are confident that there is a strong desire springing up in the public mind that the musical education of the people of this country should be placed on a much improved basis, and feel satisfied that,when this desire is expressed, Parliament will give it due attention, The Council are of opinion that no efforts should be wanting on the part of this Society to assist the cultivation of a fine art so well calculated to aid religious observances, and promote the moral elevation and healthy recreation of all classes of society.

COPYRIGHT IN WORKS OF ART.

Early in the year the Council received a memorial, signed by no less than one hundred and thirty-three of the leading artists, painters, sculptors, and engravers, as well as publishers of works of art, pointing out the present defective state of the Engraving and Artistic Copyright Acts, and requesting the Council to give their serious attention to the subject with a view to obtain some speedy amendment of the law so as to give effectual protection to the proprietors of copyright in such works; and the memorialists specially dwelt upon the very serious injuries to which the proprietors of engravings were subjected by reason of the piracies effected by means of photography, and the importance of obtaining from the Legislature summary remedies by which such piracies could be put down.

The Council at once expressed their willingness to undertake the duty, and invited the memorialists to meet them in conference, and decide upon the best course to be taken; accordingly a meeting took place on Friday, the 2nd of February, which was numerously attended, and the various points having been discussed, the Council undertook to have a bill prepared, embracing as far as possible the views expressed at the meeting. A draft bill has accordingly been drawn, and will shortly be printed and brought before the memorialists for their approval. It has however been found that the same reasons which prevented the bringing forward the bill connected with the Dwellings for the Labouring Classes, must preclude any legislation on this subject during the present session of Parliament.

PIRACY OF TRADE MARKS.

The importance which this subject has now assumed, especially since the passing of the Merchandize Marks Act of 1863, has rendered it necessary that some further legislation should take place in order to protect the interests, not only of traders and merchants, but also of the public in general; this was well pointed out in a paper read before the Society this session by Mr. E. M. Underdown [see *Journal*, p. 370]. The question has occupied the serious attention of the Council, who appointed a Committee to inquire into and report upon the subject, and on this committee they obtained the services of a number of gentlemen connected with the leading manufactures of the country, as well as lawyers and others having special knowledge of the question.

At the first meeting of the committee it was found that a bill for remedying the grievances complained of was in course of preparation by direction of Mr. Michael Bass, M.P., one of the members of the Committee; at a subsequent meeting the Draft of the Bill was laid before them, and, having been taken into consideration, met generally with their approval. The Committee subsequently had interviews with the Board of Trade upon the subject, and there is reason to believe that the provisions proposed in the bill, and especially that portion of it so essential to the good working of the measure—a Registry of trade marks—will meet with the approbation of the Board.

MEMORIAL TABLETS OF EMINENT PERSONS AND REMARKABLE LOCALITIES.

The expediency of marking in some suitable manner the spots where eminent men have lived and died, as well as localities connected with remarkable events, has occupied the attention of the Council, and a committee has been appointed to inquire and report how this may be effected. This committee has collected a considerable amount of information, which it is intended to publish from time to time in the *Journal*. The objects and scope of the committee are well explained in a letter from Mr. George Bartley, published at p. 437 of the *Journal*.

The committee are now engaged in investigations as to the best methods to be adopted for marking such houses and localities.

PARIS UNIVERSAL EXHIBITION, 1867.

The Commission appointed by Her Majesty in connection with this Exhibition applied to the Council early in the session to give their aid to the undertaking. This request, it need hardly be said, the Council readily complied with, and they placed the rooms of the Society at the disposal of the various committees of metropolitan exhibitors convened for the purpose of arranging the space allotted to the respec-

tive classes; the Secretary has been engaged in attending these meetings, and giving such assistance and explanations as were required to facilitate the work. All the committees have now met, and nearly all have completed the allotment of space.

UNION OF INSTITUTIONS.

The Secretary's report, read to the Conference of representatives of Institutions held on the 13th inst., and published in the *Journal* for the 15th inst., shows the position of this branch of the Society's operations, and to this the Council beg to refer.

The Society's system of Annual Examinations, which has been in operation during eleven years, has extended itself, through the instrumentality of the Local Educational Boards, to about one hundred of the most important centres of population in the United Kingdom: and these Local Boards for the most part have not only assisted to carry out the Society's own Examinations, but have held, on their own authority, other preparatory Examinations in elementary subjects, with the view of leading on younger and less advanced persons to become candidates for the Society's certificates and prizes. By such means the Society has been directly and indirectly the cause of providing wide spread encouragement to the education of adults of the industrial classes; and its example has been followed very largely and effectively by the Government Department of Science and Art, which has established a system of Annual Examinations, resembling in all its principal features, the system which this Society first propounded in 1853 and still carries on. It is also a matter of congratulation for the friends of this Society, that the Local Examinations of the Universities of Oxford, Cambridge, London and Durham, had their origin in the movement which this Society commenced.

In 1865, and in the present year, this Society has had the advantage of the co-operation of the Royal Horticultural Society, in those parts of its system of Examination which relate to botany and the practical arts of cultivating flowers, fruits and vegetables. If other Societies and public bodies would unite, in like manner, with this Society in extending a knowledge of these Examinations, in offering encouragements to those who might avail themselves of them, and in publicly recognising the value of the certificates, the system would rest on a broader basis, and a great deal more good might be done.

FINANCE.

The Council append to this report the usual financial statement of the accounts of the Society and a balance-sheet. These were published, in accordance with the bye-laws, in the last number of the Society's *Journal*. The members will bear in mind that the recent renewal of the Society's lease, coupled with heavy expenses for repairs and refurnishing the Society's meeting room and library, had in a previous year involved the Society in a very large outlay, which had to be met at once, and could only be discharged by anticipating to some extent the Society's revenue, and spreading the cost over a number of years. In order to enable this to be done, the Council thought it right to obtain an advance from their bankers, and during the course of the past year, as appears by the accounts, the sum of £1,300 was borrowed, which has been repaid.

It will have been observed that the accounts are not signed by the auditors elected at the last annual meeting. Mr. Reader Lack resigned his office in consequence of having been directed by the Government to proceed to Vienna; Mr. Philip Wright went to Australia last autumn, and did not return in time to complete his audit of the accounts. In the meantime the Council, in conformity with the Bye-laws, appointed an auditor in place of Mr. Reader Lack—Mr. W. T. Mackrell, by whom the accounts have been audited and signed.

The report having been unanimously adopted,

Mr. COHEN proposed a vote of thanks to the Council for their valuable services during the past year.

Mr. BOTLEY seconded the motion. He felt that the Society was deeply indebted to them for the able manner in which they had conducted its affairs; for his own part he thought the institution of the Cantor Lectures, and the arrangements that had been made in reference to them, were especially creditable to the Council.

The vote of thanks having been put by Mr. Botley, and unanimously passed,

The CHAIRMAN, in acknowledging the compliment on the part of himself and his colleagues, said he thought the fact that the number of members was as great now as in 1862, the year of the International Exhibition, when there was naturally an unusual amount of interest excited in the Society's operations, was a strong proof of the high estimation in which it continued to be held, and of the approbation with which the conduct of its affairs was regarded.

Mr. GEORGE WHITE, cordially concurring in the vote of thanks which had just been passed, wished to offer one or two suggestions, if he might be permitted to do so. He thought the hour at which the Wednesday evening meetings took place might advantageously be changed to an earlier one. There were many members, like himself, who resided out of town, and who experienced great inconvenience from the lateness of the hour at which the discussions closed. He thought that if the meetings began at seven o'clock and ended at nine it would be more convenient. It might even be worth consideration whether the hour might not be made earlier still, so as to enable members to attend after leaving their business, and before dinner. In that case five o'clock would seem a suitable time, though, perhaps, the general body of the members were hardly yet prepared for so radical a change. He also thought the papers read were in many cases too long; if they were of such a length as only to occupy half-an-hour, there would be more time for discussion, and the meetings would be more interesting. As to the Cantor lectures, on the other hand, he thought they might with advantage be somewhat lengthened, and that in some cases, perhaps, the subjects treated might be discussed, or a few questions put to the lecturer by his audience.

Mr. COHEN dissented from the last speaker as to the expediency of increasing the length of the lectures, and was strongly opposed to the introduction of any discussion after them. It would be quite unusual, and would in most cases be objected to by the lecturers themselves. With regard to the hour of meeting, he thought the present one was, upon the whole, the most convenient.

Professor TENNANT wished to draw the attention of the Council to the possibility of injury to the pictures in the great room from the gases produced at some of the chemical lectures.

Mr. PURLING thought the lectures should not be lengthened. An hour was, in his opinion, quite enough for any lecture.

The CHAIRMAN said that, with regard to the length of the papers read at the ordinary meetings, he thought there would be some difficulty in shortening them to any considerable extent. His own experience led him to the conclusion that no subject of any importance could be properly dealt with in less than an hour. With regard to the Cantor lectures, he thought if they were extended much beyond the hour, the audience were apt to become impatient. As to the expediency of having a discussion after them, he agreed with Mr. Cohen that this would generally be objected to by the lecturers themselves. It should be remembered that opportunities for discussion were given at our ordinary meetings, the papers being prepared with that view, while lectures, on the other hand, were of a different character, being intended simply to afford information, and not to raise disputed questions. As to the expediency of making any change in the hour of meeting, he thought the matter worthy of careful consideration, which he was sure it would receive from the Council.

Mr. TEULON agreed with Mr. White as to the increased convenience that would result, especially to members like himself, who lived out of town, from holding the meetings at an earlier hour. He might take this opportunity of saying that, having been one of their treasurers during the past year, he desired to bear testimony to the accurate and clear manner in which the accounts were kept. He had gone through them with great care, and could speak confidently on the subject.

A vote of thanks having been passed by acclamation to the Chairman for his valuable services during his three years of office,

The CHAIRMAN, in acknowledging the compliment, expressed the pleasure he had experienced in promoting the Society's objects during the long term for which he had had the honour of being Chairman of the Council. He should still, as a member of that body, be anxious to do all in his power to further the Society's interests and promote its usefulness.

The ballot having remained open one hour, and the scrutineers having reported, the Chairman declared that the following members had been elected to fill the several offices. The names in *italics* are those of members who have not during the past year filled the offices to which they have been elected :—

COUNCIL.

PRESIDENT.

H.R.H. the Prince of Wales, K.G.

VICE-PRESIDENTS.

Edward Akroyd, M.P.
Lord Berners.
W. H. Bodkin (Assistant Judge).
Sir J. P. Boileau, Bart.
The Earl of Caithness.
Harry Chester.
Henry Cole, C.B.
Lord de l'Isle and Dudley.
The Earl Granville, K.G., F.R.S.
William Hawes.
C. Wren Hoskyns.
Lord H. G. Lennox, M.P.
Lord Lyttelton.
Right Hon. Sir John S. Pakington, Bart., M.P.
Sir Thomas Phillips, F.G.S.
The Marquis of Salisbury, K.G.
Sir Francis Sandford.
Sir J. Kay Shuttleworth, Bart.
Thomas Twining.
Vice-Chancellor Sir Wm. Page Wood, F.R.S.

COUNCIL.

John Bell.
Professor Bentley.
D. Roberton Blaine.
John Bailey Denton.
James Easton.
Peter Graham.
Henry Maudslay.
J. Slaney Pakington.
Colonel Scott, R.E.
Benjamin Shaw.
Alderman Waterlow.
Geo. F. Wilson, F.R.S.

TREASURERS.

W. T. Mackrell.
Seymour Teulon.

AUDITORS.

John Murray.
Philip Wright.

SECRETARY.

Peter Le Neve Foster, M.A.

FINANCIAL OFFICER.

Samuel Thomas Davenport.

At the conclusion of the General Meeting a Special Meeting was held, when the following candidates were balloted for and duly elected members of the Society :—

Adams, John, 391, Strand, W.C.
Adamson, Daniel, Newton Moor Iron Works, Hyde, near Manchester.
Bones, John, Clarendon House, Maida Vale, W.
Calley, Samuel, Brixham, Devon.
Freeman, John, 3, Wigmore-street, W.
Haines, Edmund Napoleon, Dartford, Kent; and Maidstone Wharf, Upper Thames-street, E.C.
Hirst, John, jun., Dobcross, near Manchester.
Hulett, Lieut. C.H., Royal Artillery Barracks, Aldershot.
Lawson, William Thomas George, Freetown Cottage, Norfolk-road, Dalston, N.E.
Messent, John, 429, Strand, W.C.
Nairn, Michael B., St. Mary's Priory, Kirkcaldy, N.B.
Papillon, Philip Oxenden, Colchester.
Paraire, Edward Lewis, 36, Mornington-crescent, N.W.
Patrick, H. W., 18, Broad-street, Golden-square, W.
Pembroke, James, 8, Austin Friars, E.C.
Rothwell, William, Clare-place, Halifax.
Rowett, William, 9, Bush-lane, E.C.
Saunders, Thomas Harry, Dartford, Kent; and Maidstone Wharf, Upper Thames-street, E.C.

FINAL EXAMINATION, 1866.

In the "List of Certificates" given in the *Journal* of the 8th instant, a 3rd class certificate in Chemistry was, owing to the number not having been clearly written on the candidate's paper, awarded in error to "No. 1045—Thomas Jones, of the Salford W. M. Coll.," instead of to No. 1048—Langridge, Daniel, 31, Salford W. M. Coll.—in a chemical works.

Proceedings of Institutions.

SHREWSBURY INSTITUTION.—The report for the last year congratulates the members upon the continued prosperity of the institution; the list of subscribers (the total number being 490) shows a falling off in the total number of about 60, but most, if not all of these, were persons who joined the society in the last quarter only of 1864, and under the special inducement offered of full privileges of membership during that term, at

the low rate of three shillings. The present roll of subscribers, if it can be kept up, will be sufficient to maintain the institution in a sound state of efficiency. The cash account shows that the income of the society during the past year has been £634 4s. 11d., and the expenditure £732 14s. 2d., the excess of the latter over the former being about £100, which was paid out of the large balance in the treasurer's hands at the commencement of the year. Of this £100, one-half was spent in books added to the library, the other in improvements and purchases of an exceptional nature, such as furniture and necessary alterations in the building. In April, 1865, the directors placed the sum of £100 at interest in the Salop County Savings Bank; this amount they hope to leave untouched, to provide against any contingency that may arise. The library during the past year has received the promised large accession of new works, and has otherwise been put in good working order. The directors observe with some regret that, instead of the profit anticipated upon the lectures and entertainments as heretofore, they have experienced a loss from this source to the extent of £40 19s. 1d., and if to this sum be added rent of room and gas, the total deficit on account of lectures would exceed £60. This circumstance is the more to be regretted, because the heaviest losses occur upon the lectures given by lecturers of a high class. The business connected with the institution, and especially that arising out of the management of the music hall, has become so large, that a paid secretary has been appointed, at a salary of 100 guineas.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, 1866.

The thirty-sixth meeting will commence on Wednesday, the 22nd of August, at Nottingham, under the presidency of William R. Grove, Esq., Q.C., F.R.S. The Local Secretaries for this meeting are—Dr. Robertson, Edward J. Lowe, Esq., F.R.A.S., F.L.S., Rev. J. F. M'Callan, M.A., Exchange Hall, Nottingham; and the Local Treasurer is I. E. Wright, Esq.

The General Committee will meet on Wednesday, the 22nd of August, at one p.m., for the election of sectional officers, and the despatch of business usually brought before that body. On this occasion there will be presented the report of the Council, embodying their proceedings during the past year. The General Committee will meet afterwards by adjournment.

The first General Meeting will be held on Wednesday, the 22nd of August, at 8 p.m., when the President will deliver an address; the concluding meeting on Wednesday, the 29th of August, at 3 p.m., when the Association will be adjourned to its next place of meeting.

At two evening meetings, which will take place at 8 p.m., discourses on certain branches of science will be delivered.

There will also be other evening meetings, at which opportunity will be afforded for general conversation among the members.

The Committees of Sections will meet daily from Thursday, the 23rd of August, to Wednesday, the 29th of August inclusive, at 12 a.m. precisely.

The Sections will meet daily, from Thursday, the 23rd of August, to Tuesday, the 28th of August, inclusive, at 11 a.m. precisely.

Reports on the progress of science, and of researches entrusted to individuals and committees, and other communications intended for presentation to the Sections, are expected to be forwarded in letters addressed to the Assistant General Secretary, at Nottingham, previously to the meeting, accompanied by a statement whether the author will be present, and on what day, so that the business of the Sections may be satisfactorily arranged.

The reports complete, and concise abstracts of other communications, are to be delivered to the Secretaries of the Sections before which they are read, previously to the close of the meeting, for publication in the Transactions. As the reports on science may be interesting to more Sections than the one which originally called for them, it is desirable that the authors should be prepared to furnish the means of reading them in any other Section at the request of the President and secretaries of that Section.

The following are the titles of the Sections to which communications may be presented:—

Section A. Mathematics and physics.
" B. Chemistry and mineralogy, including their applications to agriculture and the arts.
" C. Geology.
" D. Biology.
" E. Geography and ethnology.
" F. Economic science and statistics.
" G. Mechanical science.

On and after July 30, until August 17, life members who intend to be present at the meeting may receive their tickets by applying to the General Treasurer, and returning to him their life member's invitation circular; annual subscribers who wish to receive their tickets must return their invitation circular, with £1 enclosed, to the General Treasurer, W. Spottiswoode, Esq., 50, Grosvenor-place, London, S.W.

The Executive Committee at Nottingham will elect new members and associates on the usual conditions.

Ladies may become members on the same terms as gentlemen. Ladies' tickets (transferable to ladies only) may be obtained by members on payment of £1.

After August 17, personal application for tickets must be made at the Reception Room, Nottingham, which will be opened on Monday, August 20th. The Reception Room will be kept open for the issue of tickets not later than 8 p.m. on *soirée* evenings, and not later than 6 p.m. on other evenings.

Gentlemen who have in any former year been admitted members of the Association may, on this occasion, renew their membership, without being called upon for arrears, on payment of £1.

EFFECTS OF DENSITY OF POPULATION AS REGARDS FEVERS.

The demolitions in Paris have given rise to the reconsideration of some curious facts and theories respecting fevers. It is well known that in marshy districts intermittent, paludal, or marsh fevers assume a regular or periodic character. They reign constantly in the marshy lands of the Campagna of Rome, and they appear at times in places not ordinarily subject to them. This happens frequently, almost invariably, when the plough is first put into virgin soil, when great forests are cleared, or when extensive excavations are made in inhabited places.

It has been remarked as extraordinary that so little effect of the kind has been produced by the demolitions and excavations which have attained so much importance in Paris during the last few years. The soil has been largely disturbed at an immense number of points in the city, and subterranean works have been carried on at the same time to a proportionate extent, yet the cases of intermittent fever are said to be rare. To what is this immunity to be attributed? Dr. A. Tripier, of Paris, has taken up the question, and says that he only knows one reply that has been hazarded, and that was from M. de Tournon, the Prefect of Rome at the commencement of the present century, respecting the territory under his charge. In a work entitled "Etudes Statistiques sur Rome et la partie occidentale des Etats Romains,"* M. Tournon says, "It is universally known that in the territories which include the basis of the lakes of Bolsene, of the Tiber, and of

* Paris: Firmin Didot.

the Pontine marshes, in certain parts of the Sabine valleys, and at some points of the valley of the Sacco, as well as in all that part of Tuscany known as the Maremme, intermittent fevers appear regularly in the period commencing with June and ending with September, often become violent, carry off numbers of the inhabitants, and leave still more marked with the symptoms of persistent disease. It is a fact, moreover, that in this vast region there are scarcely any isolated dwellings, and those which exist are deserted during the summer season; the fevers are less frequent in proportion to the size of the village, and in Rome itself they only appear in the more sparsely populated portions of the city, and do not touch the thronged quarters." The neighbourhood of stagnant water does not, according to M. Tournon, exercise much influence on the sanitary condition of the population, for the highest and driest parts of the plain between Rome and Tivoli and Rome and Frascati, for example, are almost as unhealthy as the borders of the marshes of Ostia or of Marcaresa, and less healthy than certain points of the banks of the lakes of Boleno or of Bracciano. It is known also, that the sanitary condition of each locality is liable to variations; thus in Rome, the quarters dei Monti, del Borgo, and di Trastevere are generally considered as very healthy, yet at the present moment the fever is raging there and driving out the inhabitants. The mounts Cœlius, Aventino, and Janicule are actually uninhabitable, yet Titus Livy calls them *Saluberrimos Colles*. The Strada Pia, bordered by palaces and convents, is no longer inhabited without anxiety in its upper portion, and yet the Papal Summer Palace of the Quirinal stands at its entrance towards the city. The Piazza del Popolo is now unhealthy, and the streets giving on it, although reported healthy, are suffering from fever. Thus you may pass, almost insensibly, from a healthy portion of a city to one quite the reverse, but the danger invariably diminishes in proportion to the density of the habitations. "I recommend to the attention of the reader," says M. Tournon, "these remarkable facts, that the miasma gives way in presence of the agglomeration of the buildings; that the closer they are together the less are its effects: and that the centre of a town presents the maximum of security. Moreover, whenever a village begins to be depopulated, no matter from what cause, the malaria first attacks its outer parts, advances as the houses are emptied, lays siege to the inhabitants, pursues them towards the centre, where it attacks them when they are too much diminished in numbers to repel the germs of death by congregation."

After having enumerated the ravages caused by the malaria, M. Tournon shows, from historical data, that those parts of the Pontifical States which were unhealthy in 1810, as they are now, were formerly covered with habitations, and were salubrious; that the Etruscans, the Sabines, and the Latins covered this part in such numbers that there are enumerated fifty-three nations between the Tiber and the Liris, besides a large population between the Liris and the Fiord. After Rome had commenced forming a territory at the expense of her neighbours, matters did not change much during the first five centuries; but that at a later date, when the local population had been destroyed, and the Romans had been drawn off in great numbers by incessant wars, unhealthiness began to arise from the depopulation, and from the substitution of pasture for arable lands; and that, at a still later period, when Rome herself suffered from civil war, as well as from the evils of foreign expeditions, the depopulation became complete, and the insalubrity grew rapidly to nearly what it is in our time.

Dr. Colin, formerly professor in the French School of Medicine, has likewise studied the subject at Rome, and adopts M. Tournon's view with respect to the influence of density of population on the fevers produced by malaria.

It is certain, says Dr. Tripier, that during the last fifteen years, Paris ought, then, theoretically, to have suffered from intermittent fevers, if some influences were not at work to counteract that of the malaria. It cannot be said that, from the point of view in question, the disturbance of the soil of a town differs in any respect from the like disturbance in any other place; and it is observed that where the inhabitants are driven away, cases of periodic fever do make their appearance from time to time in the neighbourhood of those places where large public works are in hand.

Dr. Tripier says it is difficult to avoid arriving at the same conclusion as M. Tournon respecting the preservative influence of density of population in the case of the fevers in question; but he evidently does not accept the proposition of M. Tournon, that stagnant water has no special influence in such cases. Nor does he fail to remark that however density of population may be good against the influence of intermittent fevers, it is certainly not so, but precisely the contrary, as regards the greater part of other pestilential diseases.

Fine Arts.

THE PARIS SALON AND MEDALS OF HONOUR.—The annual exhibition of works of art, or *salon* as it is called, and which has already been spoken of in the *Journal*, has created universal interest this year—not on account of its intrinsic excellence, or of its extent—for the number of works was less than it was last year, and certainly the quality, or at any rate the number of important works was not extraordinary—yet on Sunday, the 17th June, admission being gratis on Sundays, the number of visitors is reported to have reached 70,000. The interest taken by the public in the annual exhibition grows, doubtless, with the increasing interest in all subjects connected with art in France, and this has been greatly fostered by the encouragement and patronage of the Government, and by the multiplication of societies for the exhibition of pictures, statues, and other productions. The interest felt by the artistic world is also greatly stimulated by those causes to which the new system of popular election of the juries, and the trusting of the award of the two great medals of honour to the body of decorated artists, has no doubt added a new impulse. In the *Journal* of the 8th inst. was given the result of the first voting for the two medals of honour; since that notice was written the matter has been decided, and the effect is, that no grand medal is to be given this year. Of the 506 artists entitled to vote in this case, 197 took part on the first occasion, 175 on the second, and 174 on the final trial. As already stated, the ten artists at the head of the poll on the first occasion became the only candidates on the second trial, and the result was as follows:—Bonnat, historical painter, obtained 49 votes; Carpeaux, sculptor, 38; Corot, landscape, 23; E. Lévy, poetic, 20; Gumery, sculptor, 20; Auguste Bonheur, landscape and animals, 19; T. Robert-Fleury, history, 15; Fromentin, landscape, 14; Gérome, history and *genre*, 8; and E. Dubufe, poetic, 6 votes. At the last and final voting, M. Bonnat obtained 50 votes, M. Carpeaux, 49; and M. Corot, 32, while 76 voters expressed their opinion that no work deserved a grand medal this year, and seven wasted their votes by inserting some name not in the list of candidates. Many objections have been raised against the new regulation with respect to these great medals. On the one hand it is contended that the register is much too limited, and that all exhibiting artists should have a vote, whether they themselves have been found worthy by former juries of a distinction of any kind or not; this of course would include a great number of young men whose artistic powers are small and whose judgment is probably no greater, and who would very possibly form a majority of the whole voters. The objection that the various classes of artists, painters and sculptors, those who adopt history, or landscape, or poetic subjects, vote for one of

their own class, seems fairly balanced by the accusation of a jealous feeling against a rival; and there is good reason to believe that *amour-propre* is certainly as strong an incentive as *camaraderie* or *esprit de corps*. It is not probable that so novel an arrangement will satisfy all parties, and, considering the small amount of experience the world has yet had in such matters, it is safer to look at results than to dogmatize upon so-called principles which, to say the least, are far from being beyond question. It may be affirmed almost absolutely that the painter who received the largest number of votes exhibited one of the two best historical works, the other being the "Warsaw" of M. T. Robert-Fleury, who was also one of the chosen ten; secondly, the author of the most remarkable piece of sculpture was only one step below his competitor; thirdly, M. Corot, although many object to his monotonous, grey style of treatment, undoubtedly stands in the very first rank of landscape painters. The Emperor has just purchased one of M. Corot's works in the exhibition for 18,000 francs (£720). Another argument in favour of the decision of the artist voters is that they are certainly perfectly in accord with the majority of the critics and of the artistic world of Paris in the opinion that no work exhibited this year presents sufficient importance to entitle the artist to a grand medal of honour. Looking at the results, therefore, there is little ground of complaint against the arrangement as it stands at present, and not much chance of improving it; while the education of the judgments of artists, and their induction, as it were, into the public life of their own world is a matter of such interest to art that any improvement in the system should be hailed with satisfaction. Any rash step that might cause the abandonment of the experiment would be a lamentable error.

Manufactures.

MOROCCO MANUFACTURES.—In the list of productions of Tetuan, fire-arms take first rank. There are thirty-eight master gun-barrel makers, who employ about 230 men; there are twenty-eight master gun locksmiths, assisted by about 112 under workmen; and there are forty shops where the barrels and locks are mounted on stocks. In all these departments great credit is due to the manufacturers, for the work they turn out is surprisingly good. Last autumn the Sultan sent to Tetuan two patterns of muskets with percussion caps, such as were of late years used in the English and French armies, with orders that two of each kind should be manufactured for his Majesty as a trial. The order was executed with such intelligence that the Sultan has now directed that no more guns on the old Moorish patterns be furnished him from Tetuan, and he has commissioned the manufacturers to supply the whole of his regular troops with the new musket. The British Consul, who examined the Moorish muskets by the side of their European pattern, states that the former surpassed, both in strength and finish, the originals. The barrels are all subjected to a very powerful proof, and each arm is turned out complete at a cost of £1 4s. The original Moorish arms are also manufactured with extreme care, and the costly ones are damaskeened and otherwise decorated with real artistic taste. Besides the gunsmiths' shops there are thirty-six forges, where the blacksmiths' work for the regiments of Tetuan and for the interior of Northern Morocco is carried on. The following is a list of the number of hand-looms employed in Tetuan in the manufacture of several kinds of textile fabrics:—

	Looms.
Coarse woollen cloth used as outer clothing by the natives	225
Fine white woollen cloth shaicks	145
Blankets	34
Cotton cloth and napkins	32
Linen cloth and napkins	30
Woollen sashes	34
Silk and gold tissue	10
Silk head-dresses	9
Rush mats (very pretty)	45
Total	564

Three tan-yards, with 103 master tanners, partially supply the shoe-trade of the place with both sole-leather and red and yellow morocco skins. The shoemakers' shops number 140, and have always an excess of work, as the demand for Moorish slippers for the Egyptian market is constantly increasing. The potteries of Tetuan are also of considerable importance in Morocco, and the clay found here is much superior to any used in the English potteries. The geometrical-shaped and many-coloured tiles which are so conspicuous an ornamentation of the Alhambra at Granada, are still manufactured here, and add much to the beauty of the houses of the Moorish grandees. A Tetuan Moorish gentleman visited some years ago Malaga, and was surprised to find in its neighbourhood potters turning out utensils in the same manner and shapes as those in his native town. He had the curiosity to ask one of the Spanish potters his name, and was greatly astonished to hear him pronounce the Moorish surname of one of the principal master-potters of Tetuan. Besides the foregoing trades and manufactures, there are several other minor branches of industry in which Tetuan competes to advantage with other towns of Morocco; for instance, in gold embroidery on leather and velvet, arabesque paintings, for the ornamentation of houses and furniture, sieve-making, dyeing, and brass-founding.

Commerce.

INSECT WAX.—The trade in this article in China is large. In 1864, from the single port of Hankow alone, 5,100 cwt. were exported. It is taken by the Chinese as medicine, but is principally used as stearine in the manufacture of candles. It is one of the most valuable of the many products of Sze-Chuen, being worth 60 and 70 taels per picul (133 lbs.). The wax is deposited, for the protection of its eggs, by an insect which inhabits the trees on which the wax is secreted. The formation of the wax was a subject which occupied the especial attention of M. Simon, a French savant, who, a year or two ago, passed a considerable time in the interior, during which he is said to have traversed the greater portion of Sze-Chuen, and to have reached the eastern confines of Thibet. It is to be hoped the result of his researches into the products of the former fertile province will ere long be made public. A short report has already appeared in the *North China Herald*.

REFUSE TEA.—According to the last consular reports, it would seem that the tea dust and stalks, which formed the principal ingredients in brick tea, which was formerly shipped largely to Russia, are now being directed to this country. This tea dust is the refuse remaining after the packing of the tea, and is worth from 5 to 7 taels per picul. A portion is disposed of for local consumption in Shanghae, but it is principally shipped to England, where it is said to meet with a ready sale. In 1864, 5,288 piculs of 133 lbs. were shipped from the port of Hankow alone.

CHINESE SUGAR.—From the port of Amoy the average export of sugar in 1863 and 1864 was 89,000 piculs, but in consequence of the existing troubles the cultivation of the sugar cane is much less attended to. At Ningpo there has been a great decrease in the shipments.

THE YIELD OF PETROLEUM in the United States during the last five years has been as follows:—1861, 24,000,000 gallons; 1862, 40,000,000; 1863, 70,000,000;

1864, 87,000,000; 1865, 91,160,000. The product is now 14,000 barrels a day.

BEETROOT SUGAR IN THE UNITED STATES.—The *Toronto Weekly Leader* gives the following information on this subject:—"In the United States attempts have been made at various times to start a trade in the manufacture of beetroot sugar, but the results have not yet reached any very extensive proportions, nor have they been attended with much success. In 1862 some Germans commenced the business of growing beet and making sugar in Chatsworth, Illinois. The late war, however, ruined the business, but not until ten tons per acre of the beets had been produced on 100 acres (a yield less than half of the average yield in a good season in France), and some 8,000lbs. of sugar was manufactured. This identical tract, including about 2,300 acres of land, has recently been procured by a regularly organised association or company, who sent an agent to Germany last winter for suitable machinery and apparatus, and for a supply of seed. This season, at least 600 acres of the above tract will be planted with beets. The manufacturing process will be superintended by one of the original German proprietors. This effort is the most feasible and systematical of any that have yet been made, and we are inclined to look for satisfactory results. We do not know what variety of beet has been made use of; the white Silesian is the variety used in Europe, and it would probably be successful here. It furnishes in its pulp almost as much food for animals as the turnip or mangel wurzel, and gives at the same time a large proportion of sugar. It will be difficult in this country, where labour is scarce and so many enterprises are on foot which yield large profits to capital, to concentrate the time, the patience, and the capital upon an object of this kind, which are necessary to its successful development. Time will, however, demonstrate its advantages; and will, we hope, make this continent an active competitor with Europe in the business of supplying the world with sugar. The principal difficulty suggested by the experiments made was, that the soil and climate of the north-western States do not ripen the beet suitably for the profitable manufacture of sugar."

IMPORTS OF BONES.—Baron Liebig, some time since, energetically protested against England's consuming such an enormous quantity of bones, but the imports last year amounted, nevertheless, to 74,307 tons, and in some years they have reached nearly 85,000 tons. They are principally used for manure and for charcoal for the sugar refiners.

COFFEE STATISTICS.—The following statistics, relating to the importation of coffee into Great Britain, are from M. Sabonadière's treatise on Coffee-planting in Ceylon:—"In the ten months ending 31st October, 1865, 107,250,000 lbs. of coffee were imported into the United Kingdom. In the corresponding period of last year, the quantity was not so large by 14,750,000 lbs. Of the total imports, Ceylon contributed 68,000,000 lbs; other British possessions, 18,500,000 lbs.; Brazil, 9,250,000 lbs.; Central America, 4,250,000 lbs.; and all other foreign countries, 7,250,000 lbs. The quantity on which duty was paid in the first ten months of the past year, 1865, amounted to 25,750,000 lbs., which is a diminution, in comparison with last year's return for the same period, of 772,869 lbs. A gradual decline in the consumption of coffee has taken place within the last four or five years, and is attributable in part to the greater demand for chicory, and in part to the increased liking for tea. Of Chicory, it may be observed that last year 99,564 cwts. were entered for duty, whereas in 1862 the amount was only 9,883 cwts., notwithstanding that the rate of duty had increased in the interval from 12s. to 12s. 6d. per cwt. The quantity of coffee exported from this country in the same months of this year was 82,000,000 lbs., or nearly 17,000,000 lbs. in excess of the shipments for the like period in 1864; Holland, France, Hanse Towns, Russia, Prussia, Belgium, Italy, Austria, and Turkey having been the principal customers. In the bonding receptacles, the stock on the 31st October last was 30,250,000 lbs., or about 4,000,000 lbs. less than on the same day in 1864.

Colonies.

BISMUTH IN NEW ZEALAND.—An Auckland paper says:—"It has been now ascertained that large deposits of this valuable metal exist in this colony, but its intimate association with copper renders its reduction by smelting on a commercial scale quite impracticable. Both metals may, however, be separated by dissolving the ore in nitric acid, and precipitating the bismuth first and afterwards the copper both in fine powder, but the cost is prohibitory except as an experiment. The attention of two of our colonists has been for some time drawn by it, and they have, after much trouble, succeeded in discovering a solvent, by which means they extract, in the first place, all the copper in a pure metallic state, and afterwards the bismuth, without the slightest alloy from other metals. The process is described as very economical, easy, and capable of being carried out by ordinary manual labour."

NEW SOUTH WALES.—IMMIGRATION.—By a parliamentary return it appears that this year there has been a great increase in the number of immigrants who have come with a view to farming operations. By a return under the Crown Alienation Act, in January, 1865, the purchasers were 98, and the area 5,727 acres; the number in January, 1866, was 414, and the area 48,496 acres. Again, in February, 1865, there were 164 purchasers, the area 11,000 acres; and for the same month of 1866, purchasers 363, and area 30,000 acres. From the southern districts there is a complaint of want of employment, and it is said the unproductiveness of last, and bad prospects of the approaching season, are telling severely on the working population. At the same time the gold-fields have ceased to absorb any appreciable quantity of labour.

THE INTERCOLONIAL EXHIBITION.—A Melbourne paper says that the arrangements are steadily progressing, and there is now every prospect that the exhibition will embrace a full representation of the products of the different Australian colonies. The Tasmanian Government has promised to assist the Melbourne commission. A similar step has been taken by the Queensland Government, and the articles that are to be forwarded from that colony will be previously exhibited in Brisbane. The only colonies whose action appeared to be rather lukewarm were New South Wales and South Australia, and accordingly it was resolved, at a meeting of the Melbourne commission, to send deputations to Sydney and Adelaide, and to urge upon the Governments the necessity of contributing liberally towards the forthcoming exhibition, and also to arrange the basis of a plan by which the Australian colonies may be grouped in one department at the Paris Exhibition in 1867. Two commissioners have proceeded to Adelaide, and their efforts have been attended with considerable success, and there is every likelihood that South Australia will be adequately represented at the exhibition. The commission appointed by the Tasmanian Government comprises sixteen of the leading names in the colony, and a grant of £500 has been promised by the authorities to enable them to carry out the undertaking. At the last meeting of the Melbourne commission, the secretary stated that applications for space were steadily coming in. It was agreed at the same meeting to act as the commission for the management of the Victorian products for the Paris Exhibition of 1867. The secretary suggested that the products of the Australian colonies should be put, as in Melbourne, in one group, not as in London, where they were divided by walls. There are many sound reasons in support of this proposal, the chief being the gain of space and the enhanced effect in the aggregate by such combination.

THE COMMISSIONERS FOR THE PARIS EXHIBITION have organised committees and addressed circulars to a large number of influential persons in all parts of New South Wales, with a view to facilitate the collection of specimens of the arts, manufactures, and products of the colony for exhibition at Paris in 1867.

Obituary.

LOUIS ETIENNE WATELET.—One of the patriarchs of the French school of painting, Louis Etienne Watelet, died recently, at the age of eighty-six. In his time M. Watelet had a high reputation, but the present generation scarcely knew him. He is looked upon as the father of the picturesque school of French landscape painting. He was the pupil of Bidaud, but he soon quitted the routine style to which they were bound, and studied for himself in the valleys of Switzerland and Savoy. If Watelet had never painted anything himself he would deserve to be remembered as the first master of Paul Delaroche, and as the adviser of Troyon, Paul Huet, Lapito, Corot, Aligny, Thuillier, Desgoffe, de Fontenay, who, with many others, worked in his studio. It is remarked that all his pupils remained original in their various styles, which would seem to prove that Watelet taught young artists how to see, think, and act for themselves; and it would be difficult to say anything more laudatory of a teacher. Watelet received his first medal in 1810, a first-class medal in 1819, and in 1825 the Cross of the Legion of Honour. His works, and even the artist himself, were forgotten or unknown by the great majority of the world of art, but Watelet was a thorough enthusiast, and, when the world had given him up, continued to paint out of pure love of his art; but of late years he would never allow his pictures to be seen except by his intimate friends. He would not, he said, make a public exhibition of a talent in decline.

Notes.

DR. J. D. HOOKER, of Kew, has been elected corresponding member in the section of botany, in place of his late father, Sir William Hooker, by the French Academy of Sciences.

RACING PRIZE.—The French race-course commission has voted the sum of ten thousand francs (£400) for an object of art to form the Paris prize of the spring races of 1867. The competition is open to French artists and others residing in France. The sketches are to be sent in before the first day of July, and the work is to be executed and delivered by the first of March next.

HORSE FLESH FOR FOOD.—The Prefect of Police of Paris has issued an ordinance recognising and regulating the use of horse flesh for human food. Considering, says the document, that the flesh of the horse has been introduced into consumption in several countries without apparent harm, the sale of horse meat as food is permitted on the following conditions:—That special slaughter-houses be established. That no meat be sold by the ordinary horse-slaughterers. That the animals whose flesh is to be eaten be killed in the presence of a veterinary inspector. That the pieces shall be stamped. All unhealthy horses are excluded. At every place where such meat is sold the fact must be indicated by a placard. All restaurateurs or others who make use of horse-flesh shall be compelled under penalties to inform their customers of the fact.

PROTECTION OF TREES FROM INSECTS.—The following simple method of preserving fruit from the ravages of insects is recommended by the Imperial Society of Practical Horticulture of the Rhone, and by the director of the School of Arboriculture of the Parc de la Fête d'Or at Lyons. The quantity of fruit destroyed by insects that deposit their eggs in the blossoms is enormous. These creatures are said to have a great antipathy to vinegar, the mere odour of which is enough to drive them away, and, in some cases, to destroy them, and nothing more is required than to sprinkle the branches with a mixture of vinegar and water at the moment the blossoms begin to appear. The mixture recommended consists of one part of vinegar to nine parts of water, but as French vinegar is very strong, perhaps the amount of water should be less when English vinegar is used. When the liquids are well mixed, the solution is to be sprinkled over the flower-buds by means of a garden engine or syringe, or even with a watering-pot with a fine rose. M. Denis, the director of the school referred to, tried the experiment last year, and reports that fruit trees so treated were covered with fruit, while those to which the acidulated water was not applied bore scarcely any. The other remedy proposed is against ants and other insects which mount the stems of trees. Take common lamp-oil, and expose it in the sun for three or four days, or until it acquires a gummy consistency and very disagreeable smell, then with a small paint brush paint around the tree at about two feet from the ground a band of the oil two inches wide, repeating the operation for three or four successive days. It is said that this method will protect the tree for four years at least. Perhaps coal tar might be found to answer the same purpose.

METEORIC STONES.—At a recent meeting of the Paris Academy of Sciences, M. Daubrée made an interesting communication on meteoric stones which fell on the 30th of May in the territory of Saint Mesmin, in the department of the Aube. The circumstances are thus stated by M. Daubrée:—On the 30th May, about 4·45 in the morning, weather calm and only a few clouds in the sky, a luminous mass was observed, between Mesgrigny and Payns, which crossed the sky with extreme rapidity and threw a bright light over a great space. A few seconds after this apparition three loud explosions, like the reports of cannon, were heard at intervals of one or two seconds. These were succeeded by several explosions of less force, like the discharge of muskets, and following irregularly like the firing of two ranks of soldiers. In the midst of these detonations, which became gradually weaker, was heard a loud rumbling or rolling noise similar to that of thunder. According to information collected by M. Daubrée himself on the spot, the light and reports were seen by various persons between Montereau and Payns distributed over a space of more than forty miles. After the detonations a tongue of fire darted towards the earth, and at the same time a hissing noise was heard like that of a squib, but much louder. This again was followed by a dull heavy sound, which a person compared to that of a shell striking the earth near him. After a long search he perceived, at the distance of about two hundred feet from the place where he was when he heard the noise, a spot where the earth had been newly disturbed; he examined the place and saw a black stone at the bottom of a hole nine inches deep which it seemed to have formed. This stone weighs nearly ten pounds. On the following day a gendarme named Framonnot picked up another meteoric stone of the same nature, weighing nearly seven pounds, at about two thousand feet distance from where the first fell. A third stone was found on the 1st of June by a man named Prosat, five to six thousand feet from the two spots above referred to. This last meteorite weighs nearly four pounds and a half.

MEETINGS FOR THE ENSUING WEEK.

MON.....Entomological, 7.
Asiatic, 3.
TUES. ...Geologists' Assoc., 8.
THUR....Chemical, 8. 1. Mr. Schorlemmer, "Hydrocarbons in crude benzol, &c." 2. Mr. Thorp, "Use of metallic copper in organic analysis." 3. Dr. Williamson, "Constitution and representation of chemical compounds."
FRI .. ...Archæological Inst., 4.

PARLIAMENTARY REPORTS.

SESSIONAL PRINTED PAPERS.

Par. Numb.

Delivered on 16th June, 1866.

191. Bills—Local Government Supplemental (No. 3).
192. ,, Land Drainage Supplemental (No. 2).
345. Extradition of Criminals—Return.
346. Cattle Diseases (Ireland) Act—Order in Council.
Education—Report of Committee of Council.
Superior Courts of Common Law and Courts of Chancery (England and Wales)—Second Report of Commissioners.

Delivered on 18th June, 1866.

193. Bill—New Forest Poor Relief (as amended by Select Committee).
324. Inland Revenue (Scotland)—Statement.
337. Mails (West Indies)—Return.
341. Mails (Southampton and St. Thomas)—Return.
342. Education (Ireland)—Annual Report of Commissioners.

Delivered on 19th June, 1866.

308. Royal Hibernian Military School—Returns.
332. Art Union Laws—Report, Evidence, &c.
Paris Conference—Correspondence.
Jamaica Disturbances—Despatch.

Delivered on 23rd June, 1866.

194. Bills—Artizans and Labourers' Dwellings (as amended by the Select Committee).
195. ,, Waterworks (as amended in Committee, and on recommitment).
196. ,, Rochdale Vicarage (as amended by the Select Committee).
197. ,, Paupers (Scotland).
321. Police (Scotland)—Eighth Report of Inspector.
334. Parliamentary Boroughs (Liverpool, &c.)—Return.
351. Poor Law (Ireland)—Return.
Education (Revised Code) (Scotland)—Minute.

Delivered on 25th June, 1866.

333. Cheltenham Election—Minutes of Evidence, &c.
357. Population (Scotland)—Return.
358. Knaresborough, &c., Townships—Return.
Jamaica Disturbances—Papers laid before the Royal Commission by Governor Eyre.

Delivered on 26th June, 1866.

326. Rural Police—Return.
360. Cork, &c., Baronies and Towns—Returns.
361. Revenue Departments and Post-office Packet Service Estimate—Vote "On Account."

Patents.

From Commissioners of Patents' Journal, June 22nd.

GRANTS OF PROVISIONAL PROTECTION.

Aerial navigation—1571—F. H. Wenham.
Animals, shoes for—1360—W. Clark.
Boxes, paper and cardboard—1523—J. Linnett.
Bricks—1581—C. H. Murray.
Bridges—489—T. C. Boutet.
Carding engines—1583—J. Moss.
Casks, drawing liquids from—1520—T. J. Smith.
Cop-frames—1553—J. M. Tankard and J. Cockcroft.
Defences—1437—C. P. Coles.
Electric telegraphic despatches, transmitting—1521—J. H. Johnson.
Engines—1146—E. H. Huch and F. J. Windhausen.
Envelopes and paper bags—1554—J. H. Johnson.
Fabrics, woven—1155—E. Burles.
Fibrous materials, combing—1543—J. Lecoq.
Fibrous substances, cleansing—1532—A. V. Newton.
Fibrous substances, drawing and twisting—1542—A. A. Bois.
Fire-arms—1478—T. Boyle.
Fire-arms, breech-loading—1603—S. Bayliss.
Fore and aft sails, reefing and furling—1595—G. Allix.
Furnaces—1599—R. A. Wright.
Fuel, combustion of—1611—A. P. Price.
Gas—1468—E. Buchner.
Gas burners—416—J. J. Shedlock.
Girders—1544—C. Henderson.
Grains, treating—1445—E. Gripper.
Guns, breech-loading—1585—J. Erskine.
Hops, growing—1551—E. Farmar.
Horse rakes—1490—R. and R. Maynard, jun.
Horse shoes—1547—J. Sainty.
Hydrants—1525—H. E. Newton.
Irrigators—1557—T. W. Wedlake.
Kilns—1563—P. Righetti.
Knitting looms—1185—F. A. Renault.
Lanterns—1607—J. A. Forrest.
Lay figures—1579—D. T. Lee.
Locks—1597—F. W. Kurz.
Locks—1605—R. Lancaster.
Locks and latches—1545—J. B. Fenby.
Locomotive engines for common roads—1534—W. and J. Burrows.
Malt—1559—W. Lawrence.
Muffs—1561—L. Morris.
Oil, deodorizing—1522—J. H. Johnson.
Ordnance—1548—A. Moncrieff.
Paper-ruling machines, electro-magnetic striking attachments for—1569—J. G. Tongue.
Petroleum, furnaces for consuming—1593—S. Lees.
Pockets—1243—J. R. Towers, T. Clutterbuck, and J. B. Muschamp.
Portable mangle—1528—J. Clyne.
Power, transmitting—521—A. Moore.
Pumps and fire-engines—1566—H. Bateman.
Railway signals, self-acting—1540—J. Knight.
Railways—1458—J. Cooke.
Railways—1567—H. Greaves.
Railways, crossings for—1577—J. Armstrong.
Safes—1587—J. Baxter and J. Hunt.
Sawing machinery—1519—J. East.
Seats, covers or cushions for—1386—A. Cochrane.
Sewing machines—475—W. N. Wilson.
Sewing machines—1201—J. B. Robertson.
Shaving brushes—1517—A. R. Cunningham.
Shells, and in fuses used with shells—1555—C. A. McEvoy.
Ships' decks, fittings for—1372—W. Gerard.
Small arms, triggers for—1531—M. A. Caire.
Steam boilers—1535—S. Turton.
Steam engines—1530—J. Yule.
Steam engines—1601—G. D. Kittoe.
Steam pipes, discharging condensed steam from—1591—J. Seward.
Streets, &c.—1565—A. and W. Young.
Substances, jars for preserving—1573—W. E. Newton.
Substances, treating—1014—J. H. Johnson.
Sulphurets, reducing—1493—J. D. Whelpley and J. J. Storer.
Thrashing machines—1609—S. Kilby and G. Dixon.
Timekeepers—622—C. Powell.
Tools—1466—J. T. King.
Travelling bags, &c.—1575—C. D. Abel.
Vapours, generating and heating—1410—J. Bernard.
Vehicles, recording the distance travelled and the time occupied therein by—1513—W. Clark.
Vessels, propelling—1538—T. Neville and W. Gorton.
Waterclosets, &c.—1552—D. A. Dumuis, E. J. F. Flicoteaux, E. W. Niblett, and M. L. J. Lavater.
Water, engines for pumping—1539—A. B. Brown.
Weaving, looms for—1199—J. L. Davies.
Weaving, looms for—1558—J. Hopwood.
Weights, raising and lowering—1562—J. Loader.
Work to be operated upon, holding—1524—G. R. Mather.
Worts, treating—1560—W. Lawrence.

INVENTION WITH COMPLETE SPECIFICATION FILED.

Vulcanized india rubber, utilizing waste—1649—G. T. Bousfield.

PATENTS SEALED.

3338. J. Fisher.	3. N. Thompson.
3342. J. Rea.	12. P. S. Bruff.
3345. J. Young, jun.	137. E. M. Boxer.
3346. S. Griffith.	174. A. Bennett.
3356. S. and C. Collins.	653. W. Clark.
3369. A. Barclay.	887. J. Ramage and T. Nelson.
3378. A. and J. Knowles, and J. Barraclough.	991. W. Cooke.

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PATENTS SEALED.

3353. J. Bates, and E. and E. W. Brookes.	3381. J. S. Gisborne.
3358. A. S. Brooman.	1. J. Bullough & W. Rossetter.
3366. T. Watson.	6. W. Barningham.
3368. A. S. Brooman.	48. F. Tolhausen.
3370. J. H. Kidd and J. C. Mather.	75. J. Clunan & N. Nightingale.
3374. E. J. Hughes.	469. M. Henry.
3376. R. Smith.	845. W. A. Dixon.
3377. T. Parkinson.	1151. J. M. Ryo Catteau.
3379. G. Hawksley.	1167. A. Borgnet.
3380. R. Beck.	1229. R. H. Hughes.
	1331. H. Essex.

PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

1524. J. A. Sparling.	1559. W. Clark.
1547. R. Brownlee.	1568. W. Rowan.
1570. W. L. and T. Winans.	1609. W. Clark.
1571. W. L. and T. Winans.	1563. A. Twaddell.
1572. W. L. and T. Winans.	1573. W. E. Newton.
1582. W. L. and T. Winans.	1588. W. Toovey.
1584. W. L. and T. Winans.	1580. T. F. Parsons.
1612. J. Griffiths.	1594. J. L. Hughes.
1545. T. Smith, T. Moore, and M. Burrell.	1589. S. Knowles and R. Hayward.
1551. J. L. Clarke.	1592. E. Myers & W. R. Williams.
	1601. J. O. Mathieu.

PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

1512. G. C. Grimes.	1520. G. Redrup.
1517. J. Mills.	